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Natural enemies

Natural enemies can suppress many insect pests in the landscape. In the landscape environment, use of beneficial insects and mites is based mainly on conserving natural populations, such as enhancing their environment by introducing nectar and pollen plants to provide supplemental food sources for beneficial insects, using selective pesticides, or making spot applications of pesticides. Using commercially-reared natural enemies may be helpful in the landscape, but the expense may be prohibitive.

A note of caution: Beneficial insects and mites may be more vulnerable to broad-spectrum insecticides (and some fungicides) than the pests they are targeted to control.

There are two main categories of natural enemies, predators and parasitoids.

Predators consume many prey in a lifetime, and tend to be larger and stronger than their prey. They may feed on many types of prey.

Parasitoids live inside their host or are attached to the outside of the host's body. Only the immature stage feeds on the host, and kills only one individual host. They may be much smaller than their host. The parasitoid is typically a specialist, that attacks only one or a few closely related species of host. They tend to be good at seeking out their host, and have high reproductive rates and short generation times.

Natural enemies - continued

Resources for more information: *Biological Control of Insect Pests in Forested Ecosystems: A Manual for Foresters, Christmas Tree Growers and Landscapers*. Deborah G. McCullough et al. Michigan State University. Extension Bulletin E-2679.

Biological Control of Insects and Mites: An Introduction to Beneficial Natural Enemies and Their Use in Pest Management. Daniel Mahr and Nino M. Ridgeway NCR481.

Midwest Biological Control News website: <http://www.entomology.wisc.edu/mbcn/mbcn.html>